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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,446	08/19/2003	Wolfgang Bredow	MAY-0018	4408
23413	7590	03/01/2005	EXAMINER	
CANTOR COLBURN, LLP. 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			FERGUSON, MICHAEL P	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,446

Applicant(s)

BREDOW ET AL.

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/22/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-7 and 9-12, in the reply filed on November 29, 2004 is acknowledged.

Drawings

2. The drawings are objected to because of the following:

Elements **10**, **20**, **50** and **60** are improperly cross-hatched based on the material of the elements.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: PLASTIC JOINT.

Claim Objections

4. Claims 2 and 11 are objected to because of the following informalities:

Claim 2 (line 2) recites "especially longitudinal grooves". The term "especially" renders the claim indefinite as it is unclear as to what is positively claimed as the invention.

Claim 11 (line 1) recites "the seal". It should recite --a seal--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 (line 2) recites "which spans a common end surface and is sealed there". It is unclear as to which surface of which element "a common end surface" refers.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 5-7 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Numata et al. (US 6,567,074).

As to claim 1, Numata et al. disclose a plastic joint designed to hold a selector pin 2 that is capable of moving around a swivel axis, the plastic joint comprising: an inner, first joint element 4,6 and an outer, second joint element 5,8 for mounting in a device 10, wherein the first joint element includes a first (rubber elastomer) plastic material 4 with axially opposite end sections, and the second joint element includes a second (rigid) plastic material 8 with borings that lie within the swiveling axis, which hold the end sections such that they form the swiveling axis (Figures 2-3B).

As to claim 2, Numata et al. discloses a plastic joint comprising a selector pin 2 that is equipped on a part of its circumference with profiling (peripheral shape) in which the first joint element 6 is set (Figure 2).

As to claim 3, Numata et al. disclose a plastic joint wherein directly adjacent to the first joint element 4,6, a ring (defined by peripheral surface of element 8) made of the second (rigid) plastic material 8 encompasses the selector pin 2 (Figure 2).

As to claim 5, Numata et al. disclose a plastic joint comprising a seal element (defined by peripheral surface of element 4) that connects the first joint element 4,6 and a ring (defined by opening 4e) with the second joint element 5,8 (Figures 3A and 3B).

As to claim 6, Numata et al. disclose a plastic joint wherein the seal element (defined by peripheral surface of element 4) is comprised of a film made of thermoplastic polymer (rubber elastomer).

As to claim 7, Numata et al. disclose a plastic joint wherein the seal element (defined by peripheral surface of element 4) has a restoring function (Figures 3A and 3B).

As to claim 12, Numata et al. disclose the use of a plastic joint as a joint in a continuously variable switch in devices for controlling machines (Figure 1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Numata et al.

As to claim 4, Numata et al. fail to disclose a plastic joint wherein the first plastic material is polyoxymethylene, and the second plastic material is polypropylene.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a plastic joint as disclosed by Numata et al. to have a first plastic material comprising polyoxymethylene, and a second plastic material comprising polypropylene as such practice is a design consideration within the skill of the art.

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11. Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (US 5,738,352) in view of Meyer et al. (US 6,709,183).

As to claims 1 and 3, Ohkubo et al. disclose a plastic joint designed to hold a selector pin **60** that is capable of moving around a swivel axis **Y**, the plastic joint comprising: an inner, first joint element **3** and an outer, second joint element **20** for mounting in a device **4A,4B**, wherein the first joint element includes a first (inherently) plastic material with axially opposite end sections **51,52**, and the second joint element includes a second material (bearing in ring **20**; not shown) with borings that lie within the swiveling axis, which hold the end sections such that they form the swiveling axis (Figures 3-4B).

Ohkubo et al. fail to disclose a plastic joint comprising a second joint element including a second plastic material.

Meyer et al. teach a joint comprising a second joint element **7,8** including a second (rubber elastomer) plastic material **11,12** with borings that lie within a swiveling axis, which hold end sections **3,4** of a first, inner joint element **2** such that they form the swiveling axis; wherein directly adjacent to the first joint element, a ring (defined by bearing **11,12**) made of the second plastic material encompasses the selector pin (via the first joint element); the second rubber elastomer plastic material providing for a stronger, more durable joint by absorbing high forces perpendicular to the swiveling axis and permitting large angles of torsion around the swiveling axis (column 1 lines 39-43, Figure 10). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a plastic joint as disclosed by Ohkubo

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et al. to have a second joint element (bearing in ring **20**; not shown) including a second rubber elastomer plastic material as taught by Meyer et al. to provide for a stronger, more durable joint.

As to claim 2, Ohkubo et al. discloses a plastic joint comprising a selector pin **60** that is equipped on a part of its circumference with profiling (surface texture) in which the first joint element **3** is set (Figure 3).

As to claim 4, Ohkubo et al. in view of Meyer et al. fails to disclose a plastic joint wherein the first plastic material is polyoxymethylene, and the second plastic material is polypropylene.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a plastic joint as disclosed by Ohkubo et al. in view of Meyer et al. to have a first plastic material comprising polyoxymethylene, and a second plastic material comprising polypropylene as such practice is a design consideration within the skill of the art.

As to claim 5, Ohkubo et al. disclose a plastic joint comprising a seal element (bearing in ring **20**; not shown) that connects the first joint element **3** and a ring (defined by opening **32**) with the second joint element **20** (Figure 3).

As to claim 6, Meyer et al. disclose a plastic joint wherein a seal element (bearing **11,12**) is comprised of a film made of thermoplastic polymer (rubber elastomer).

As to claim 7, Ohkubo et al. disclose a plastic joint wherein the seal element (bearing in ring **20**; not shown) has a restoring function.

As to claim 9, Ohkubo et al. disclose a plastic joint comprising a third joint element **4A,4B** having a second swiveling axis **X** that lies perpendicular to the first swiveling axis **Y**, which engages in end sections **41,42** of the second joint element **20** to form a cardan joint (Figure 3).

As to claim 10, Ohkubo et al. disclose a plastic joint wherein two of the joint elements are combined to form a spherical joint element, which encompasses a selector pin **60** and is held in a retaining element **4A,4B** such that it can swivel in two planes (Figure 3).

As to claim 11, Ohkubo et al. disclose a plastic joint wherein a seal element (inherent; not shown) extends from the selector pin **60** over the retaining element **4A,4B**.

As to claim 12, Ohkubo et al. disclose the use of a plastic joint as a joint in a continuously variable switch in devices for controlling machines (Figure 3).

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patents show the state of the art with respect to swivel joints:

Thibodeau (US 4,854,744) is cited for pertaining to joints comprising a first element made of a first plastic material, and a second element made of a second plastic material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (703)308-8591. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703)308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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02/16/05



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